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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/666,096

09/18/2003

Arun Prasad

JPP-1253CIP-2

8544

7590 03/22/2007
PENTRON CORPORATION
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EXAMINER

SMITH, NICHOLAS A

ART UNIT

PAPER NUMBER

1742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/666,096

Applicant(s)

PRASAD ET AL.

Examiner

Nicholas A. Smith

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19, 21-39, 41-59, 61-79, 81-99, 101-119 and 121-139 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19, 21-39, 41-59, 61-79, 81-99, 101-119 and 121-139 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claims 1-19, 21-39, 41-59, 61-79, 81-99, 101-119 and 121-139 remain for examination.

Terminal Disclaimer

2. The terminal disclaimer(s) filed on 10 October 2006 and 18 December 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 6,613,273 and US 6,67,112 has been reviewed and is accepted. The terminal disclaimer has been recorded. Therefore, previous nonstatutory obviousness-type double patenting rejections have been withdrawn. Upon further consideration, please view the new grounds of rejection below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-19, 21-39, 41-59, 61-79, 81-99, 101-119 and 121-139 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prasad et al. (US 2002/0114723) or Daskalon et al. (US 2002/0009380) in view of Panzera (US 2002/0017021).

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5. Examiner notes the instant claims contain new matter (fiber material in the covering material) with respect to parent applications, and therefore the instant claims have the filing date of the instant application (18 September 2003).

6. In regards to claim(s) 1-19, 21-39, 41-59, 61-79, 81-99, 101-119 and 121-139, Prasad et al. (Prasad et al., claims 1-52) and Daskalon et al. (Daskalon et al., claims 1-158) disclose the invention substantially as claimed. Prasad et al. or Daskalon et al. disclose a method for making a dental restoration comprising: forming a model of one or more teeth; coating the model with or alloy powder; applying a covering material onto the model coated with metal or alloy powder wherein the covering material is applied at a thickness equal to or less than about 8 mm and wherein the covering material comprises refractory powder; sintering the model coated with metal or alloy powder and covering material in a furnace to form a coping; and removing the covering material from the coping.

7. However, Prasad et al. or Daskalon et al. do not specifically disclose a covering material comprising a mixture of refractory powder and fibers. Furthermore, Prasad et al. or Daskalon et al., do not specifically disclose the proportions and types of fibers in a covering material as claimed.

8. Examiner notes that composite materials that include fiber materials are suggested as materials to make the finishing on the coping (Daskalon et al., col. 8, lines 44-50; Prasad et al., col. 10, lines 53-59), but not expressly as the covering material. Examiner notes that the model can be made of any suitable die material (Daskalon et al., col. 3, lines 29-30; Prasad et al., col. 3, lines 41-42). Panzera pertains to the

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manufacture of dental restorations. Panzera teaches that composite materials and/or fiber materials can be used to make the model (col. 4, lines 19-32). Furthermore, Panzera teaches that a material applied to the mold should be compatible with the model material (col. 3, lines 11-19). It would have been obvious to one of ordinary skill in the art to modify Daskalon et al.'s or Prasad et al.'s method of making a dental restoration with Panzera suggested combination of compatible materials for both the model material and the material applied to the model (for instance, a covering material) in order to match the thermal expansions of both model and covering materials and avoid cracking therein (Panzera, col. 3, lines 11-19). In the case where the model comprises a composite material and/or fiber material, Daskalon et al. or Prasad et al. in view of Panzera would meet the claim limitation. Wherein the claims contain more specific embodiments of fiber material, Panzera incorporates these such materials by reference (col. 4, lines 19-32, such as Goldberg et al. US 4,717,341, Goldberg et al. US 4,894,012, Karmaker et al. US 6,186,790 and Prasad et al. US 6,200,136). Wherein the claims require a specific range of fiber composition, Panzera teaches that materials going on a model should match the thermal expansion of the model; it would have been obvious to one of ordinary skill in the art to modify the amount of fiber material versus refractory material in order to optimize the thermal expansion of the covering material to match the thermal expansion of the model; thermal expansion of fiber materials and refractory materials are quite disparate and thus an one of ordinary skill would know to vary amounts of fiber materials versus refractory materials in order to optimize the thermal expansion. See MPEP 2144.05 II.

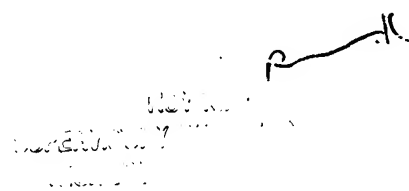
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas A. Smith whose telephone number is (571)-272-8760. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571)-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NAS

A handwritten signature, possibly "R. King", is written over a circular official stamp. The stamp contains text that is mostly illegible but appears to include "UNITED STATES PATENT AND TRADEMARK OFFICE".